

Foliar Fungicides in Wheat.

Trial ID: 12-6B

Location: Belleville Res. Center

Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 10-14-11

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:

Evaluate foliar fungicide programs for control of leaf and head diseases in winter wheat.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
BBCH Scale: BCER **Planting Date:** 10-14-11
Planting Method: SEEDED **Rate, Unit:** 1.4 millionS/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Pest Description

Pest 1 Type: W **Code:** NA

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 40 FT
Plot Area, Unit: 400 FT² **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	NONE	2011

Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P205 0 LB/A, K20 0 LB/A
2.	Spring: N 85 LB/A, P205 0 LB/A, K20 0 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 6.5 **Soil Name:** CASEYVILLE
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	87	LB/A
K	321	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

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Application Description			
	A	B	C
Application Date:	3-20-12	4-17-12	4-24-12
Time of Day:	9:00	11:00	9:00
Application Method:	Spray	Spray	Spray
Application Timing:	JOINT	HEAD	FLOWER
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	RFK
Air Temperature, Unit:	73 F	64 F	60 F
% Relative Humidity:	59	54	52
Wind Velocity, Unit:	5 MPH	0 MPH	3 MPH
Wind Direction:	SE	NE	W
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	49 F	54 F	59 F
Soil Moisture:	NORMAL	ABONOR	ABONOR
% Cloud Cover:	0	0	100
Next Rain Occurred On:	3-25-12	4-19-12	4-25-12

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER	TRZAW BCER
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	FK5	FK10.4	FK10.5.1
Stage Minimum, Percent:	FK5	FK10.4	FK10.5.1
Stage Maximum, Percent:	FK5	FK10.4	FK10.5.1
Height, Unit:	8 IN	28 IN	38 IN
Height Minimum, Maximum:	6 8	26 28	36 38

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA

Application Equipment			
	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								TRZAW 6-6-12 Moisture Percent	TRZAW 6-6-12 Test wt. lb/bu	TRZAW 6-6-12 Yield bu/A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Unit	Growth Stage	Appl Code			
1	HARMONY EXTRA NIS (ACTIVATOR 90)	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	14.1 a	57.4 a	61 b
	PZX74	2.34	SC	0.091 lb ai/a	5 fl oz/a		HEAD	B			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		JOINT	A			
2	HARMONY EXTRA NIS (ACTIVATOR 90)	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	14.3 a	57.3 a	62 b
	APROACH	2.08	SC	0.0975 lb ai/a	6 fl oz/a		HEAD	B			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		HEAD	B			
3	HARMONY EXTRA KOCIDE 3000	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	14.2 a	57.3 a	61 b
	APROACH	46.1	WG	0.346 lb ai/a	12 oz/a		JOINT	A			
	NIS (ACTIVATOR 90)	2.08	SC	0.0488 lb ai/a	3 fl oz/a		JOINT	A			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		JOINT	A			
4	HARMONY EXTRA APROACH	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	14.1 a	57.4 a	61 b
	NIS (ACTIVATOR 90)	2.08	SC	0.0488 lb ai/a	3 fl oz/a		JOINT	A			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		JOINT	A			
5	HARMONY EXTRA KOCIDE 3000	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	14.5 a	57.2 a	66 a
	NIS (ACTIVATOR 90)	46.1	WG	0.346 lb ai/a	12 oz/a		JOINT	A			
	PROSARO	3.52	SC	0.179 lb ai/a	6.5 fl oz/a		FLOWER	C			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		FLOWER	C			
6	NONTREATED								14.2 a	57.4 a	60 b
LSD (P=.05)								0.63	0.17	2.8	
Standard Deviation								0.35	0.09	1.6	
CV								2.44	0.16	2.5	
Replicate F								0.108	0.609	1.512	
Replicate Prob(F)								0.8987	0.5631	0.2668	
Treatment F								0.389	1.475	4.915	
Treatment Prob(F)								0.8454	0.2805	0.0157	

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Code								TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	
Crop Code								Injury	Injury	4-24-12	5-1-12	5-8-12	5-15-12	
Rating Date								Percent	Percent	Injury	Injury	Injury	Injury	
Rating Type										Percent	Percent	Percent	Percent	
Rating Unit														
Rating Timing														
Trt-Eval Interval								7DAT	21DAT	7 DA-B	7 DA-C	21 DA-B	21 DA-C	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate	Growth Unit Stage	Appl Code						
1	HARMONY EXTRA NIS (ACTIVATOR 90)	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	0 a	0 a	0 a		0 a	
	PZX74	100	SL	0.25 % v/v	0.25 % v/v		JOINT	A						
	NIS (ACTIVATOR 90)	2.34	SC	0.091 lb ai/a	5 fl oz/a		HEAD	B						
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		HEAD	B						
2	HARMONY EXTRA NIS (ACTIVATOR 90)	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	0 a	0 a	0 a		0 a	
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		JOINT	A						
	APROACH	2.08	SC	0.0975 lb ai/a	6 fl oz/a		HEAD	B						
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		HEAD	B						
3	HARMONY EXTRA KOCIDE 3000	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	0 a	0 a				
	KOCIDE 3000	46.1	WG	0.346 lb ai/a	12 oz/a		JOINT	A						
	APROACH	2.08	SC	0.0488 lb ai/a	3 fl oz/a		JOINT	A						
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		JOINT	A						
4	HARMONY EXTRA APROACH	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	0 a	0 a				
	APROACH	2.08	SC	0.0488 lb ai/a	3 fl oz/a		JOINT	A						
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		JOINT	A						
5	HARMONY EXTRA KOCIDE 3000	50	SG	0.028 lb ai/a	0.9 oz/a		JOINT	A	0 a	0 a		0 a		0 a
	KOCIDE 3000	46.1	WG	0.346 lb ai/a	12 oz/a		JOINT	A						
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		JOINT	A						
	PROSARO	3.52	SC	0.179 lb ai/a	6.5 fl oz/a		FLOWER	C						
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v		FLOWER	C						
6	NONTREATED								0 a	0 a	0 a	0 a	0 a	0 a
LSD (P=.05)								0.0	0.0	0.0	0.0	0.0	0.0	
Standard Deviation								0.0	0.0	0.0	0.0	0.0	0.0	
CV								0.0	0.0	0.0	0.0	0.0	0.0	
Replicate F								0.000	0.000	0.000	0.000	0.000	0.000	
Replicate Prob(F)								1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Treatment F								0.000	0.000	0.000	0.000	0.000	0.000	
Treatment Prob(F)								1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								DISEASE TRZAW Incidence Percent 21DAT	DISEASE TRZAW Severity Percent 21DAT	DISEASE TRZAW 5-8-12 Incidence Percent 21 DA-B	DISEASE TRZAW 5-8-12 Severity Percent 21 DA-B		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Unit Stage	Appl Code					
1	HARMONY EXTRA NIS (ACTIVATOR 90) PZX74 NIS (ACTIVATOR 90)	50 100 2.34 100	SG SL SC SL	0.028 0.25 0.091 0.25	lb ai/a % v/v lb ai/a % v/v	0.9 0.25 5 0.25	oz/a % v/v fl oz/a % v/v	JOINT JOINT HEAD HEAD	A A B B	0 a	0 a	0 a	0 a
2	HARMONY EXTRA NIS (ACTIVATOR 90) APROACH NIS (ACTIVATOR 90)	50 100 2.08 100	SG SL SC SL	0.028 0.25 0.0975 0.25	lb ai/a % v/v lb ai/a % v/v	0.9 0.25 6 0.25	oz/a % v/v fl oz/a % v/v	JOINT JOINT HEAD HEAD	A A B B	0 a	0 a	0 a	0 a
3	HARMONY EXTRA KOCIDE 3000 APROACH NIS (ACTIVATOR 90)	50 46.1 2.08 100	SG WG SC SL	0.028 0.346 0.0488 0.25	lb ai/a lb ai/a lb ai/a % v/v	0.9 12 3 0.25	oz/a oz/a fl oz/a % v/v	JOINT JOINT JOINT JOINT	A A A A	0 a	0 a		
4	HARMONY EXTRA APROACH NIS (ACTIVATOR 90)	50 2.08 100	SG SC SL	0.028 0.0488 0.25	lb ai/a lb ai/a % v/v	0.9 3 0.25	oz/a fl oz/a % v/v	JOINT JOINT JOINT	A A A	0 a	0 a		
5	HARMONY EXTRA KOCIDE 3000 NIS (ACTIVATOR 90) PROSARO NIS (ACTIVATOR 90)	50 46.1 100 3.52 100	SG WG SL SC SL	0.028 0.346 0.25 0.179 0.25	lb ai/a lb ai/a % v/v lb ai/a % v/v	0.9 12 0.25 6.5 0.25	oz/a oz/a % v/v fl oz/a % v/v	JOINT JOINT JOINT FLOWER FLOWER	A A A C C	0 a	0 a		
6	NONTREATED									0 a	0 a	0 a	0 a
LSD (P=.05)								0.0	0.0	0.0	0.0		
Standard Deviation								0.0	0.0	0.0	0.0		
CV								0.0	0.0	0.0	0.0		
Replicate F								0.000	0.000	0.000	0.000		
Replicate Prob(F)								1.0000	1.0000	1.0000	1.0000		
Treatment F								0.000	0.000	0.000	0.000		
Treatment Prob(F)								1.0000	1.0000	1.0000	1.0000		

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Pest Code									DISEASE	DISEASE	DISEASE	DISEASE	
Crop Code									TRZAW	TRZAW	TRZAW	TRZAW	
Rating Date									5-15-12	5-15-12	5-18-12	5-18-12	
Rating Type									Incidence	Severity	Incidence	Severity	
Rating Unit									Percent	Percent	Percent	Percent	
Rating Timing													
Trt-Eval Interval									21 DA-C	21 DA-C			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Form Unit	Other Rate	Other Unit	Growth Stage	Appl Code				
1	HARMONY EXTRA NIS (ACTIVATOR 90)	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A			0 a	0 a
	PZX74	2.34	SC	0.091	lb ai/a	5	fl oz/a	HEAD	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
2	HARMONY EXTRA NIS (ACTIVATOR 90)	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A			0 a	0 a
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	HEAD	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	HEAD	B				
3	HARMONY EXTRA KOCIDE 3000	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A			0 a	0 a
	APROACH	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
4	HARMONY EXTRA APROACH	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A			0 a	0 a
	NIS (ACTIVATOR 90)	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
5	HARMONY EXTRA KOCIDE 3000	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	46.1	WG	0.346	lb ai/a	12	oz/a	JOINT	A				
	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FLOWER	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLOWER	C				
6	NONTREATED									0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000

Foilar Fungicides in Wheat.

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Trial Comments

1. Protocol: DuPont (US 297/12/01 MWJ).
2. Ratings: CI 7 DAT, 21 DAT. DI/DS 21 DAT and just prior to senescence.
3. Application timings:
 - A, JOINT = after tillered to jointing
 - B, HEAD = heading before F10.5
 - C, FLOWER = flowering
4. Plots were scouted throughout the growing season for leaf and head diseases with none found at any time.
5. Ratings on 5-18-12 are just prior to senescence.
6. DAT = Days after treatment.
Ratings at 7 days after the JOINT, HEAD, and FLOWER application were on 3-27-12, 4-24-12, and 5-1-12, respectively.
Ratings at 21 days after the JOINT, HEAD, and FLOWER applications were on 4-10-12, 5-8-12, and 5-15-12, respectively.
7. Harvested 6-6-12, 4.375 ft by 37 ft.